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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/695,706	10/25/2000	Axel Thomsen	50246-070	1505

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EXAMINER

TON, MY TRANG

ART UNIT PAPER NUMBER

2816

DATE MAILED: 03/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/695,706

Applicant(s)

THOMSEN ET AL. 

Examiner

My-Trang N. Ton

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10/19/01 & 12/27/01.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-27, 29 and 31 is/are pending in the application.
- 4a) Of the above claim(s) 13-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-4, 12, 29 and 31 is/are rejected.
- 7) ☒ Claim(s) 5-11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 October 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 2-12, 29, 31 drawn to a signal processing integrated circuit, classified in class 327, subclass 69.
- II. Claims 13-27 drawn to an instrumentation amplifier, classified in class 327, subclass 339.

Inventions Group I and Group II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, the different inventions have different modes of operation and different functions.

Applicant's election with traverse of Group I in Paper No. 12 is acknowledged. The traversal is on the ground that the inventions cannot be considered as related as subcombinations disclosed as usable together as a single combination as presented in the restriction requirement. After reviewing the restriction of claims 2-27, 29 and 31, the examiner has now withdrawn the restriction made under the related as subcombinations disclosed as usable together as a single combination reasons between Groups I and II. However, the present invention remains restrictable under unrelated reasons. The restriction was inadvertently overlooked by the examiner. Any inconvenience caused by this oversight is regretted.

Art Unit: 2816

Non-elected invention Group II, claims 13-27 are withdrawn from further consideration.

The examination of Group I, claims 2-12, 29 and 31 as follow:

***Specification***

If Applicants desire the cross reference to related applications cited in the specification (for example, pages 1-2) be considered by the Examiner and made of record in this case they must submit complete information of the related applications. The complete information (i.e, serial number) is not readily available to the Examiner.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 2 is rejected under 35 U.S.C. 102(b) as being anticipated by Kaplit (U.S Patent No. 4,498,781).

Kaplit discloses in fig. 2 a data compression system including an input (46), an output (54), a chopper stabilized, multistage feedforward amplifier (66, 68) connected between the input (46) and the output (54) and an analog and digital converter (52, col. 3, line 25) as recited in claim 2.

Claims 2 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Salem (U.S Patent No. 4,488, 824).

Art Unit: 2816

Salem discloses in Fig. 3 a bandgap voltage reference and temperature sensor including an input (26), an output (62), a chopper stabilized multistage feedforward amplifier (28 and 60), and an analog to digital converter (59) as recited in claim 2. The circuit is fabricated on an integrated circuit (see col. 2, lines 7-8) as recited in claim 12.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-4, 12, 29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaplit as applied to claim 2 above.

As stated above, every element of the claimed invention recited in above claim 2 can be seen in the circuit of Kaplit. However, this reference does not show the "analog to digital converter is a delta sigma modulator" (claim 3), "a rough buffer" (claim 4), "fabricated on an integrated circuit" (claim 12).

Regarding the delta sigma modulator, although Kaplit does not expressly state that the A/D 52 is a delta signal modulator, this difference is not of patentable merit since the A/D 52 might be a type of delta sigma modulator.

Art Unit: 2816

With the advance of today's technology, it would have been obvious at the time the invention was made for one skilled in the art to realize that the A/D 52 of Kaplit can be implemented as the delta sigma modulator.

Regarding the buffer limitation, it is old and well known in the art that it would have been obvious to incorporate the buffer connected between the input (46) and the amplifier (66) for buffering or level inverting purposes.

Regarding the "integrated circuit" limitation, with the advance of today's technology, it would have been obvious at the time the invention was made for one skilled in the art to realize that the circuit of Kaplit can be fabricated on an integrated circuit.

Claims 3-4, 29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Salem as applied to claim 2 above.

Similar reasons applied to Kaplit are applied to Salem.

***Allowable Subject Matter***

Claims 5-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Ton whose telephone number is (703) 308-4868. The examiner can normally be reached on Monday to Thursday from 7 a.m to 5:30 p.m.

Art Unit: 2816

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan, can be reached on (703) 308-4876. The fax phone number for this Group is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

March 10, 2003



My-Trang Ton  
Primary Examiner  
Art Unit 2816